



EPARK-SOFTWARE BASED PARKING SYSTEM

Akshay Shinde ¹ | Rohit Badole ¹ | Tushar Khachane ¹ | Akshay Bavalekar ¹

¹ Trinity College of Engg and Research Pune

ABSTRACT

As the number of vehicles continues to raise, parking spaces are at a premium in city streets. In gathering, due to the lack of knowledge about street parking spaces, heuristic circling in the thoroughfares not only expenditures drivers' interval and fuel, but also increases city overcrowding. In the come around of the recent trend on the system to build convenient, green, and energy-efficient smart conurbations, common techniques implemented by high-profile smart parking organisations be situated look over, and the concert of the various approaches are compared. A mobile sensing unit has been advanced as an alternative to the fixed sensing approach. This one is mounted on the passenger parallel of a car to measure the distance from the vehicle to the nearest roadside obstacle. By extracting parked vehicles' features from the collected trace, a supervised learning set of rules go without been developed to calculation roadside parking occupancy. Multiple road assessments were conducted around Wheatley (Oxfordshire) and Guildford (Surrey) in the U.K. In the case of accurate GPS readings, enhanced by a map equivalent performance, the accuracy of the organisation be situated in the air 90%.

I. INTRODUCTION:

Now a days at big hand is critical problematic of rivulet of traffic due to proliferations the use of vehicles. And due to this the parking problem also increasing. So the passion behind this work is just about better places administration with fair too profitable calculating procedures. So we contrivance the app which provides us location based parking which are completely hassle free. As the quantity of automobiles continues to grow, car parks spaces are at a premium in city streets. A quantity guesstimate prototypical is derived to calculate the density of sensing units required to asylum urban streets. The valuation is quantitatively compared with a stable recognizing resolution. The domino effect rally that the mobile sensing approach can perform at the same level as fixed sensing solutions when accurate location information is available but considerably more sensors are looked-for.

II. LITERATURE SURVEY:

Paper Name: Mathematical Formulation of a Deterministic Parking form System (PRS) With Fixed Costs

Author: K. C. Mouskos, J. Tavantzis, D. Bernstein and A. Sansil

Description:

Description. A problem faced in chief metropolitan areas, is the search for parking space that results in tremendous loss in output time, excess pollution, and driver frustration. The most traditional methods utilize to alleviate the search for parking are fixed signs to parking lots, variable message signs that continuously update the figure of available parking spaces at specific parking lots, route preparation algorithms from an origin to a specific parking lot, as well as disincentives to the use of individual automobiles through parking pricing and strict enforcement of parking violations. An innovative methodology to address at least incompletely the search for parking is through a parking reservation system. In this paper, a mathematical formulation is presented for performing parking space assignment to the users based on the minimization of the classification wide parking cost subject to the assignment constriction and the parking lot capacity constraints. The problem can be solved with any commercially available solver and it can be shown to yield binary integer solutions.2. The doodb graphical password database: Data analysis and benchmark results

Paper Name: Cruising for parking

Author: Donald C. Shoup

Description:

In this paper, we present a concomitant algorithm for automatic respect of not only substantial activities, but also, in some cases, their intensities, using five triaxial wireless accelerometers and a wireless heart rate watch. The algorithm has been evaluate using datasets consisting of 30 physical gymnasium activities collected from a total of 21 people at two unlike labs. On these activities, we have obtained a gratitude accuracy performance of 94.6% using subject-dependent training and 56.3% using subject independent training. The addition of heart rate data improve subject-dependent credit accuracy only by 1.2% and subject-independent recognition only by 2.1%. When recognizing activity type without differentiating intensity levels, we obtain a subject independent performance of 80.6%. We discuss why heart rate data has such little discriminatory power.

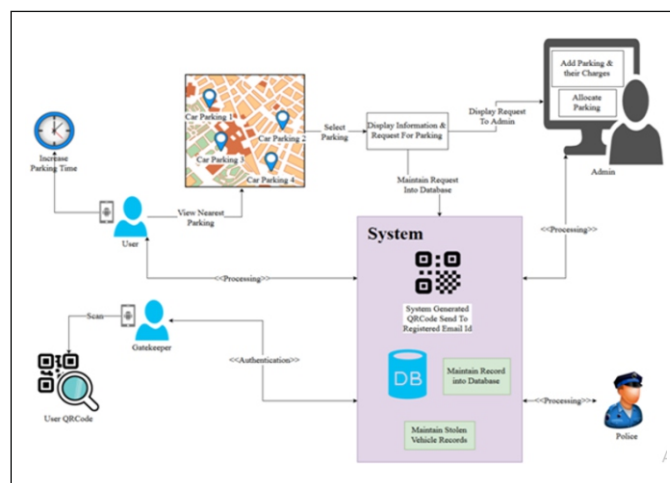
Paper Name: Cruising for parking

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Description:

Description. In this paper, we present a real-time algorithm for automatic credit of not only physical activities, but also, in a number of cases, their intensities, by five triaxial wireless accelerometers and a wireless heart rate monitor. The algorithm has been evaluated using datasets consisting of 30 physical gymnasium activities collected from a total of 21 populace at two different labs. On these activities, we have obtained a recognition accuracy performance of 94.6% using subject-dependent training and 56.3% using subject independent training. The adding of heart rate data improves subject-dependent recognition accuracy only by 1.2% and subject-independent recognition only by 2.1%. When recognizing activity type with no differentiate intensity levels, we obtain a subject self-governing presentation of 80.6%. We talk about why heart rate data has such little prejudiced power.4.

III. SYSTEM ARCHITETURE:



Description:

1. **User registration:** user information and vehicle information.
2. **QR Code generation:** User and allocated parking information is encrypted by AES algorithm and stores in QR code.
3. **Billing:** cost calculation
4. **Stolen vehicle:** Identification of vehicles by cross checking in stolen vehicles database.

User can book car parking in advance from mobile application at anytime and anywhere. System is capable to find stolen vehicle.

ALGORITHM:**1. AES****AES 256:**

In the implementation of this AES-256 algorithm has a plaintext of 128 bits and key of 256 bits size. The number of rounds of operations in AES- 256 is 14. The key generation process of AES 256 is different from other AES algorithms.

The AES-256 algorithm is composed of three main parts: Cipher, Inverse Cipher and Key Expansion. Cipher converts data to an unintelligible form called cipher text while Inverse Cipher converts data back into its original form called plaintext. Key Expansion generates a Key Schedule that is used in Cipher and Inverse Cipher procedure. Cipher and Inverse Cipher are composed of specific number of rounds For both its Cipher and Inverse Cipher, the AES algorithm uses a round function that is composed of four different byte-oriented transformations:

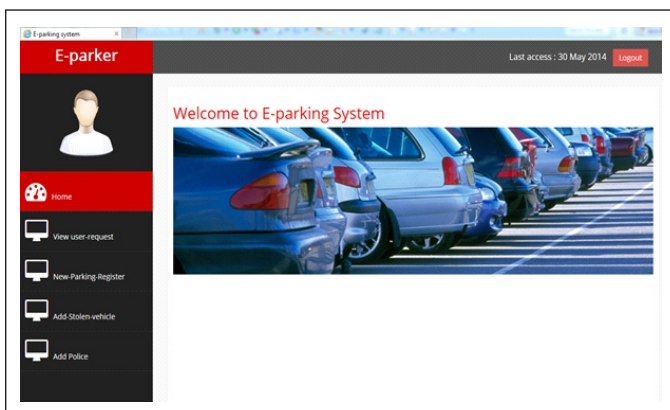
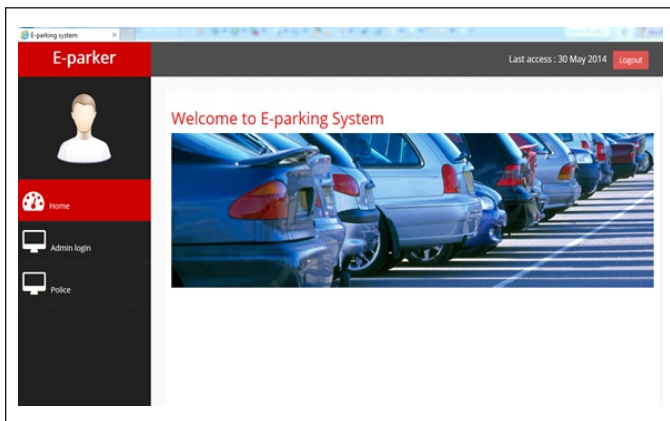
- 1) Byte substitution using a substitution table (S-box)
- 2) Shifting rows of the State array by different offsets
- 3) Mixing the data within each column of the State array
- 4) Adding a Round Key to the State

2. KNN

1. Determine parameter k = number of nearest neighbor.
2. Calculate the distance between the query instance and all the training samples.
3. Sort the distance and determine nearest neighbor based on the k th minimum distance.
4. Gather the category y of the nearest neighbor.
5. Use simple majority of the category of nearest neighbor as the prediction value of query instance.

IV. PROJECT SCOPE:

A software inevitabilities specification (SRS) is a manuscript that is created when a detailed explanation of all aspects of the software to be built must be specified before the assignment is to commence. It is imperative to note that a formal SRS is not always written. In fact, there are many instances happening which effort expended on a SRS powerfulness be better spent in other software commerce happenings.

SCREEN SHOT:**VI. CONCLUSION:**

We be necessary waited for eparking, a new impertinent car parks prearrangement which is constructed on MILP archetypal that earnings prime explanation wished-for intended for with dynamism too statically apportioning car parks resources to parkers-providing bendable money up forward-facing booking occasions. The newfangled impressions introduced in this is the amalgamation of immediate uncertainties with share-time reservations. We also have anticipated evaluating procedures for both static and dynamic reservations that maximize the profit starting parking. Widespread reproduction consequences indicate that the proposed arrangement significantly cuts the total nominal cost for completely parkers.

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